

Title (en)
MICROWAVE CHEMICAL REACTOR

Title (de)
CHEMISCHER MIKROWELLEN-REAKTOR

Title (fr)
REACTEUR CHIMIQUE A MICRO-ONDES

Publication
EP 1796830 A2 20070620 (EN)

Application
EP 05817939 A 20051214

Priority
• IB 2005003782 W 20051214
• IT PI20040097 A 20041224

Abstract (en)
[origin: WO2006067579A2] Microwave heating apparatus (1) for chemical-physical processes comprising a microwave source (4), for example a magnetron or a klystron or a solid state oscillator (FET transistor), operatively connected to an end of an antenna (10) at a connector (12) . The antenna (10) is put in a reaction container (3) where it irradiates with microwaves a reacting material (25) . In particular, the antenna (10) can be coated with a sheath (15) that avoids a direct contact with the reacting material (25), or alternatively, can be put into in a housing (7) executed in the container (3). The housing (7), made of a material transparent to microwaves, can cross the reaction container (3) for a part thereof, or for all its width. The arrangement of the antenna (10) in the reacting material (25) provides a quick and effective heating. Furthermore, it is possible to increase considerably the selectivity, the control and the efficiency of a chemical-physical processes to which the heating technique above described is applied. This allows also to provide a considerable energy saving with respect to apparatus of prior art.

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